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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,329

07/14/2005

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SHM-16129

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EXAMINER

LIU, XUE H

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

08/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,329	<b>Applicant(s)</b> KIMURA ET AL.	
	<b>Examiner</b> XUE LIU	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. Amendment to the claims filed 5/27/09 is acknowledged. Currently, claims 1-10 are pending. Claims 1-5 and 7-10 have been withdrawn. Claim 6 is amended.

***Specification***

2. Objection to the specification in the previous office action is withdrawn in view of amendment to the specification.

***Claim Rejections - 35 USC § 112***

3. Rejection of claim 6 under 112, second paragraph in the previous office action is withdrawn in view of amendment to the claim.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (US 6,183,681) in view of Ichikawa et al. (US 6,334,548) and Teng (US 5,334,010).

Regarding claim 6, the limitation “switching means for guiding molding material to either one of the first and second gates” invokes 112, 6th paragraph. According to the specification, the “switching means” comprise a valve member, a cylinder unit, a piston, and a rod. Sullivan et al. teach an injection-molding method for covering a front face and a rear face of a plate-shaped member 14 with a molded layer by injection-molding, the injection-molding method comprising the steps of: preparing a first die A1 having a front side cavity face 16 that will cover the front face of the plate-shaped member 14, preparing a second die B1 having a receiving face for receiving the rear face of the plate-shaped member 14; preparing a third die B2 having a rear side cavity that will cover the rear face of the plate-shaped member 14 and a connecting passage (runner) that fluidly connects a gate at the rear side cavity face, sandwiching the plate-shaped member 14 with the first die A1 and the second die B1 and forming a front side cavity face with the front side cavity face 16 of the first die A1 and the front face of the plate-shaped member 14; injecting a heated plastic through a gate into the front side cavity 16 to mold a front side molded layer 10A; replacing the second die B1 with the third die B2 and thereby forming a rear side cavity face of the third die B2 and the rear face of the plate-shaped member; and injecting a heated plastic from a gate through the runner into the rear side cavity to mold a rear side molded layer 10B (abstract, figs. 1-5, col. 2, lines 25-67 and col. 3, lines 1-15 and claim 1). Sullivan et al. do not teach that the first die has a first gate opening at the front side cavity face, a second gate avoiding the front side cavity face, and switching means for guiding molding material to either one of the first and second gates. Sullivan et al. also do not teach injecting a

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molding material through a first gate opening at the front side cavity face of the first die into the front side cavity and injecting the molding material through a second gate avoiding the front side cavity face of the first mold and a connecting passage that will cause the second gate to open at the rear side cavity face into the rear side cavity. However, Ichikawa et al. teach an insert-injection process utilizing a die 20 that has a first gate opening at the front side cavity face 21, and a second gate avoiding the front side cavity face of 21 for molding different portions of a molded article, the process comprising injecting a resin through the first gate into a first cavity 21 to mold a portion of a molded body, and injecting a resin through the second gate into a second cavity 22 to mold a different portion of a molded body (see fig. 2 and col. 11, lines 47-53). It would have been obvious to one of ordinary skill in the art to provide the first and second gates in a mold die as taught by Ichikawa et al. in the insert-molding process of Sullivan et al. since it facilitates molding different portion of a molded body while eliminating the need of additional injection machine for supplying molding material to the mold cavities by including the gates in the molding die itself. Ichikawa et al. do not teach switching means for guiding molding material to either one of the first and second gates. However, Teng teaches a switching means comprising a cylinder 92, piston 90, valve member 80, and shaft 82, in a valve gated injection molding apparatus (see abstract, figs. 1-2, col. 2, lines 61-68 to col. 3, lines 1-24). It would have been obvious to one of ordinary skill in the art to provide the switching means as taught by Teng to the gates of Sullivan et al. and Ichikawa et al. since the switching means provides a means to change the gates between an open and closed position to regulate the flow of resin into the mold cavity.

***Response to Arguments***

7. Applicant's arguments filed 5/27/09 have been fully considered but they are not persuasive. Applicant argues that none of cited prior art teach the step of "injecting a molding material from the second gate through the connecting passage into the rear side cavity to mold a rear side cavity to mold a rear side molded layer". Applicant argues that the combination of Ichikawa with Sullivan would not result in the step as recited in claim 6 of the present application because Ichikawa does not teach supply resin to a second die. However, the Examiner notes that Ichikawa teaches a mandrel 23, and the branches of the runner 24 of the die 20 supply resin to the first cavity 21 and the second cavity 22, which are positioned between the die 20 and the mandrel 23 (see fig. 2). Therefore, the combination of Sullivan and Ichikawa appears to teach the step of injecting the molding material from the first die into a rear side cavity formed between the rear side cavity face of the third die and the rear face of the plate-shaped member as cited in the claim.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XUE LIU whose telephone number is (571)270-5522. The examiner can normally be reached on Monday to Friday 9:30 - 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on (571)272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. L./

Examiner, Art Unit 1791

/Philip C Tucker/

Supervisory Patent Examiner, Art Unit 1791